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Survey of Nuisance Urban Geese in the United States

James E. Forbes

USDA-APHIS Animal Damage Control

Problems caused by Canada geese in urban areas include defecation and molted feathers on lawns and golf courses, fowling water supplies, noise, attacks upon small children, and bird hazard to aircraft at airports. Detailed discussion of nuisance Canada geese in Connecticut and New York are reported by Forbes (1982) and Converse (1985). This paper updates the survey of nuisance Canada geese in urban areas of the eastern U.S. by Conover and Chasko (1985).

This survey was conducted to determine the size and number of urban Canada goose flocks; whether new flocks are becoming established; control techniques presently being used; and research needs recommendations. The geese discussed in this paper are not (B. C. maxima) but are a combination of all subspecies.

Special thanks go to all State Directors and District Supervisors of the Animal Damage Control program in the U.S. Department of Agriculture who contributed to the survey. I received helpful review comments from RA. Dolbeer and J. Heisterberg. M. Daby typed the manuscript.

METHODS

A simple 7-question survey form (Table 1) was sent to all U.S.D.A. State Directors. Most State Directors handle one state, but 8 cover two and 2 cover three states at the time of the survey. Responses were received from all 50 states. I realize that some urban

goose flocks may have remained unknown to State Directors, and may have gone unreported. Follow-up telephone calls were made to some State Directors to obtain additional information on specific flocks.

RESULTS

Canada geese were a problem in at least 103 urban areas in 37 states. Twenty-two states reported multiple (>1) urban flocks; 2 states with 4 flocks, 3 states with 3 flocks, and 6 states with 2 flocks (Table 2). These multiple flock states had 88 flocks comprising 275,870 geese. Flock sizes ranged from 10 to 27,500 birds. Twenty-one (approximately $1/4$) were old, established flocks that were not increasing in size. Twenty-two (approximately $1/4$) were old, established flocks which were continuing to increase in size. About $1/2$ (45 flocks) were newly established within the past 5 or 6 years.

Fifteen states reported only 1 urban flock (Table 3). These flocks were usually smaller than those in multiple flock states, ranging from 50 to 5,000, and totaling 23,850 birds. Three of these 15 flocks were old, established non-increasing flocks; 6 were old, established flocks increasing in size; and 6 were newly established flocks. The total nuisance urban Canada goose populations in the United States was conservatively estimated at 299,720.

Of the 10 routinely used control techniques

(Table 4), 3 were used most often by at least 30 states. These techniques were shellcrackers, discontinue feeding, and habitat modification. At least 20 states used fencing, gas exploders, hunting, and trap and transfer. Balloons, egg treatment, and kill permits were used by at least 12 states. Seven other techniques were cited, the most popular being mylar tape and grid wires which have been used in 7 states.

Balloons, trap and transfer, shellcrackers, and gas exploders were the techniques most frequently (8 to 10 states) reported as having been tried but found to be ineffective. Discontinue feeding, grid wires, and fences were found to be ineffective in 2 or 3 states. One state reported that using live mute swan (*Cygnus olor*) to scare geese and egg treatment did not work,

Regarding research needs, 19 respondents suggested some type of repellent. Other items high on the list included Chemosterilant, Alpha Chloralose, and improved fencing. Six other research needs were listed (Table 5).

DISCUSSION

Urban geese cause at least 3 types of problems relative to the season of the year. The most common are summer resident goose problems, e.g. the geese in Westchester County, New York, which nest and molt on urban lawns, golf courses, and corporate headquarters property. These geese later move to Long Island Sound and do not cause problems during the winter. The second type of problem is migrant geese which invade urban areas during winter but leave in spring, e.g. the 25,000 geese which winter in Rochester, Minnesota. The third type of problem is a combination of summer

and winter problems, e.g. the situation in Reno, Nevada where 1,500 summer geese are joined in the fall by an additional 11,500 migrants. It is apparent that not all urban goose problems are the same; they can be comprised of resident birds, migrant birds, or a combination of both, and must be dealt with accordingly.

Large, old, established flocks which are continuing to grow comprise 1/4 of all urban flocks. One half of all urban goose flocks are small, new flocks established in the past six years. Thus approximately 80% of all these urban problem flocks are continuing to grow and expand.

Most states which had large established older flocks are also the states which had multiple flocks. Discussions with other State Directors and my own experience indicate that multiple flocks result in logistical problems which make any control technique difficult to apply.

Most urban goose flocks, especially the larger, older established and most crowded populations, were located in areas where migrant geese winter. This results in a situation conducive to the outbreak and spread of diseases among geese (Friend 1987). Flock elimination or reduction in flock size, especially of year around urban resident flocks, would reduce this hazard to migrant geese wintering in many areas.

Most control techniques presently being used (Table 4) are directed at simply moving geese from 1 location to another, but do not solve the problem. It is not clear from the responses why so many techniques are reported to be ineffective. I believe after discussion with some respondees, that this is not due to the failure of the technique to

work, but rather that the technique cannot always be used in urban areas, e.g. discontinuing feeding often does not work because you cannot get people to stop feeding geese; shellcrackers, gas exploders, and hunting work but cannot be used in urban areas due to ordinances.

Trap and transfer, a technique tried in 23 states, has been reported as ineffective in 9 states. I found that this technique is presently used mostly in states that have small and relatively new urban flocks. My own experience in New York, where it was used for 24 years, is that it is effective in stabilizing the population, but not reducing it. Problems develop when urban goose flocks are created in recipient states. For example, several thousand geese were shipped between 1975 and 1985 from Westchester County, New York to Georgia, North Carolina, and West Virginia; all three states now report urban goose problems (Tables 2 and 3).

In summary, present goose flocks are continuing to grow in size and expand. Geese are thriving in these urban areas because they provide excellent habitat consisting of short mowed grass interspersed with water bodies, little or no natural predation, or hunting pressure. Present control techniques simply move the birds from one area to another. Uncontrolled urban goose populations have the potential to: develop epizootic outbreaks of diseases which could spread to migratory geese; and are resulting in negative attitudes in people toward geese.

MANAGEMENT IMPLICATIONS

What appears to be needed in these urban areas is a method of population reduction.

There seem to be only 3 options:

1. Direct population reduction
2. Reproductive suppression
3. or combination of both

Whatever techniques are used would have to be socially acceptable, biologically sound, humane, cost efficient, and effective. Failure to act will result in increased goose populations and problems, additional human negative attitudes towards geese and the likelihood of an epizootic outbreak which could spread to migratory geese.

The responsibility for controlling damage by urban geese rests with U.S.D.I., Fish and Wildlife Service, and the respective state wildlife agency. Obviously, what is needed is a cooperative approach by all 3 agencies to solve this problem.

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Table 1. Questions asked on the Urban Goose Questionnaire.

NUMBER	QUESTION
1.	Name of state.
2.	Name the cities, urban or metropolitaan areas in your state which presently have nuisance Canada goose problems. (List them by large geographic areas like a county.):
3.	What is your estimate of the number of geese involved in each of the above areas?
4.	How would you characterize the urban nuisance Canada goose population you have listed in Question 2? An old problem which is not increasing in size. An old problem that is continuing to increase in size. A relatively new problem which has developed in the past five or six years.
5.	Which of the following control techniques are you presently using or recommending? Discontinue feeding Habitat modification Build fences Use balloons Shellcrackers Gas exploders

Forbes

Table 1 Continued

NUMBER	QUESTION
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	Hunting Freeze oil, or shake eggs Trap and transfer State and federal kill permit other (specify)
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6.	Of the following techniques, which, if any, have you used in the past but now find are ineffective?
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	Same choices as Question 5.
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7.	Do you have any recommendations regarding research needs directed toward urban Canada geese?
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Table 2. Flock size and status for states reporting multiple flocks of urban Canada geese.

State	Flocks	x	Flock Size	Total Geese	Status of Flocks a		
			Range		A	B	C
Ark.	5	85	25 - 150	425	5		
Fla.	3	53	10 - 50	160			3
Ill.	2	10,000	20,000 b	20,000		2	
Ind.	4	7,500	5,000 - 7,000	30,000	4		
Kans.	2	1,750	1,500 - 2,000	3,500		2	
Ky.	5	320	50 - 60	1,600			5
Md.	6		?	?		2	4
Mass.	4	588	50 - 1,200	2,350	2		2
Mich.	8	3,025	200 - 10,000	24,200	1	5	2
Minn.	5	7,260	200 - 25,000	36,300	1	2	2
Nebr.	2	175	150 - 200	350			2
N.H.	2	750	500 - 1,000	1,500			2
N.J.	4	6,250	?	25,000	4		
N.Y.	5	5,620	100 - 15,000	28,100		2	3
N.C.	8	656	250 - 1,000	5,250			8
Oh.	5	7,000	?	35,000	2	2	1
Oreg.	4	1,662	650 - 2,000	6,650			4
Pa.	4	10,625	3,500 - 27,500	42,500		4	
Tenn.	3	4,000	1,000 - 8,000	12,000	2		1

Table 2. Continued

State	Flocks	Flock Size		Total Geese	Status of Flocks a		
		x	Range		A	B	C
Vt.	2	375	250 - 500	750			2
Va.	2		?	?		1	1
W. Va.	3	78	40 - 100	235			3
TOTAL	88			275.870	21	22	45

a Number of flocks per state falling into each of three status groups: A an old flock which is not increasing in size. B an old flock which is continuing to increase in size. C a relatively new flock which has developed in the past 5 or 6 years. b Size of each flock was unknown, the total number of urban geese is estimated at 20.000 for the state. ? no data provided.

Table 3. Flock size and status for states reporting a single flock of urban Canada geese.

State	Flock Size	Status a		
		A	B	C
Alas.	500		X	
Ala.	300			X
Ariz.	300		X	
Calif.	500			X
Colo.	5,000		X	
Conn.	8,000	X		
Del.	?		X	
Ga.	200			X
Miss.	11000			X
Mo.	?	X		
Nev.	1,500 - 11,500			X
Okla.	50			X
R.I.	1, 500	X		
Wash.	5,000		X	
Wis.	?		X	
TOTAL	23,850b	3	6	6

a Status of flocks reported as: A an old flock which is not increasing

in size. B an old flock which is continuing to increase in size.

C a relatively new flock which has developed in the past 5 or 6 years.

b Does not include 11,500 geese which inhabit urban area in Nevada from

November to February.

Table 4. Techniques for controlling geese, showing states that have used the techniques and those finding it ineffective.

Technique	Number of States	
	Used	Found Ineffective
Discontinue feeding	31	3
Habitat modification	30	
Build fences	29	2
Use balloons	19	10
Shellcrackers	32	8
Gas exploders	24	8
Hunting	23	
Freeze oil or shake eggs	18	1
Trap and transfer	23	9
State and federal kill permits	12	
Other:		
Mylar tape	7	
Grid wire	7	3
Drain pond	1	1
Live mute swan	1	1
Radio control airplane	1	
Flags	2	
Dogs	1	

Table 5. Recommendations for research needs directed toward urban Canada
goose control.

Technique	Number of States
	Recommending
Repellent	19
Chemosterilant	6
Improved fencing	5
Alpha Chloralose	5
Other tranquilizer	3
Public Health aspects	3
Better control tools	3
Early hunting season	3
Effectiveness of trap-transfer	1
Population reduction	3